What is claimed is:

1. A method of processing an optical signal in an optical communications network, said method comprising the steps of:

inputting said optical signal to an input of a modulator; and

overdriving said modulator with a modulation voltage signal value to produce a modulated optical signal having an extinction ratio reduced from maximum, wherein said modulated optical signal having a reduced extinction ratio as measured before propagation over the optical communications network yields a bit error rate improvement at a receiver of said modulated optical signal after propagation over the network

2. The method of claim 1 further comprising the step of, transmitting said modulated optical signal across an optical medium to a receiver, wherein said receiver receives said modulated optical signal having an eye with a compressed central portion.

3. The method of claim 1, wherein said modulator comprises a Mach-Zehnder Modulator (MZM).

4. The method of claim 1, wherein said optical communication network transmits said modulated optical signal at about an OC-192 rate, whereby the use of forward error correction may increase the data rate from its standard OC-192 value of 9.95328 Gbps by up to approximately 25%.

5. The method of claim 1, wherein said optical communications network transmits said modulated optical signal at about an OC-48 rate, whereby the use of forward error correction may increase the data rate from its standard OC-48 value of 2.488 Gbps by up to approximately 25%.

6. The method of claim 1, wherein said optical communications network transmits said modulated optical signal at about an OC-768 rate, whereby the use of forward error correction may increase the data rate from its standard OC-768 value of 39.81 Gbps by up to approximately 25%.

7. The method of claim 2, wherein said optical medium comprises a single mode optical fiber.

8. A method for improving a bit error rate of an optical signal transmitted over an optical transmission medium said method comprising the steps of:

providing a stabilized light beam to an optical modulator;

asserting at said optical modulator a modulation drive signal having a peak-to-peak voltage value; and

improving said bit error rate of said optical signal transmitted across said optical transmission medium by increasing said peak-to-peak voltage value of said modulation drive signal to overdrive said optical modulator to cause said optical signal to have a reduced extinction ratio as measured before propagation over an optical transmission medium at a receiver coupled to the end of said optical transmission medium.

9. The method of claim 8, wherein a laser diode provides said stabilized light beam.

10. The method of claim 8, wherein said optical modulator comprises a semiconductor Mach-Zehnder modulator (MZM).

11. The method of claim 8, wherein said optical conductor comprises a single mode optical fiber.

12. The method of claim 8, wherein said optical modulator comprises a lithium niobate Mach-Zehnder modulator (MZM).

13. The method of claim 8, wherein said optical modulator comprises a polymer-based Mach-Zehnder modulator (MZM).

14. The method of claim 8, wherein said optical modulator supports a modulation rate at about OC-192, whereby the use of forward error correction may increase the data rate from its standard OC-192 value of 9.95328 Gbps by up to approximately 25%.

15. The method of claim 8, wherein said optical modulator supports a modulation rate at about OC-48, whereby the use of forward error correction may increase the data rate from its standard OC-48 value of 2.488 Gbps by up to approximately 25%.

16. The method of claim 8, wherein said optical modulator supports a modulation rate at about OC-768, whereby the use of forward error correction may increase the data rate from its standard OC-768 value of 39.81 Gbps by up to approximately 25%.

17. A method for modulating an optical carrier wherein said method yields an improved bit error rate for said modulated optical carrier said method comprising the steps of:

asserting said optical carrier at an optical input of an optical modulator; and

overdriving said optical modulator with a modulation voltage signal to produce said modulated optical carrier, whereby said overdriving of said optical modulator causes said modulated optical carrier to have a less than maximum extinction ratio to improve said bit error rate of said modulated optical carrier as received by a receiver of said optical carrier.

18. The method of claim 17, wherein said optical modulator is a semiconductor Mach-Zehnder modulator (MZM).

19. The method of claim 17, wherein said optical modulator is a lithium niobate Mach-Zehnder modulator (MZM).

20. The method of claim 17, wherein said optical modulator is a polymer-based Mach-Zehnder modulator (MZM).

21. An apparatus for modulating an optical carrier, said apparatus comprising of:

an optical modulator; and

a drive voltage controller to control a modulator voltage value supplied to said optical modulator to cause said optical modulator to produce a modulated optical carrier having an extinction ratio reduced from a maximum as measured before propagation over a single mode fiber wherein said modulation voltage value supplied to said optical modulator exceeds a voltage value necessary to produce said maximum extinction ratio.

22. The apparatus of claim 21 wherein said optical modulator is a Mach-Zehnder modulator (MZM).

23. The apparatus of claim 22 wherein said MZM comprises one of a semiconductor MZM, a lithium niobate MZM and a polymer-based MZM.

24. The apparatus of claim 21 wherein said extinction ratio reduced from said maximum produces an improved bit error rate as measured at a receiver of said modulated optical carrier after propagation over fiber.